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Policies to promote collaboration in science, technology and innovation for development

Policies to promote collaboration in science, technology and innovation for development: The role of science, technology and innovation parks

Note by the UNCTAD secretariat

Executive summary

Science, technology and innovation (STI) parks are widely used as instruments to promote collaboration among actors in the innovation system, particularly between enterprises on the one side and universities and research centres on the other. Since STI parks have been implemented in very different economic and technological contexts, a wide variety of innovation outcomes may be observed. This note presents some considerations on the dimensions of the performance of STI parks as instruments of innovation policy that may be of relevance for policymakers in developing countries and suggests several issues for discussion.

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Introduction

1. STI policies for development are grounded on the notion that the long-term productive potential of an economy is largely dependent on its ability to enhance its productivity through technological progress and innovation. To this end, many countries adopt policies to upgrade their capacities to generate, exploit, transfer and apply knowledge. One such policy concerns building networks and linkages among STI stakeholders in the public sector, the business community and academia to encourage their collaboration in research and development and, more generally, in innovation.

2. While such collaboration can be and often is global in nature, its impact on economic development will necessarily be greatest when based on rich national, regional and even local interactions. Many developing countries have insufficient scientific and technological experience and capabilities, and policy support will therefore be instrumental in initiating, growing and bringing to sustainability networking activities and interactions such as innovation clusters and hubs, STI parks and business incubators.

3. Such instruments to promote technological development have been applied in a wide variety of contexts and using various models and approaches. Policymakers need to share experiences and insights in order to better develop, improve and implement policies on STI collaboration that are appropriate for their particular contexts and goals. This note presents some elements to facilitate discussion by the Investment, Enterprise and Development Commission of the various approaches in using instruments to promote collaboration among actors in the innovation systems of developing countries. Given the high prevalence of STI parks in the STI strategies of many countries, this note emphasizes the experiences available with regard to this particular policy instrument.

4. This note is structured in five chapters, as follows: chapter I discusses the importance of collaboration in innovation systems; chapter II describes the practical modalities of and functions performed by STI parks; chapter III discusses the challenges that STI parks present to policymakers and lessons available in this regard; and chapter IV presents some tentative conclusions and suggested questions for discussion by the Investment, Enterprise and Development Commission.

I. Collaboration as a key feature of innovation systems

5. An increasing number of stakeholders become involved as national innovation system policies develop and mature. The performance of a national innovation system is strongly influenced by the depth and quality of collaboration among the three main agents: Government, firms and academia.

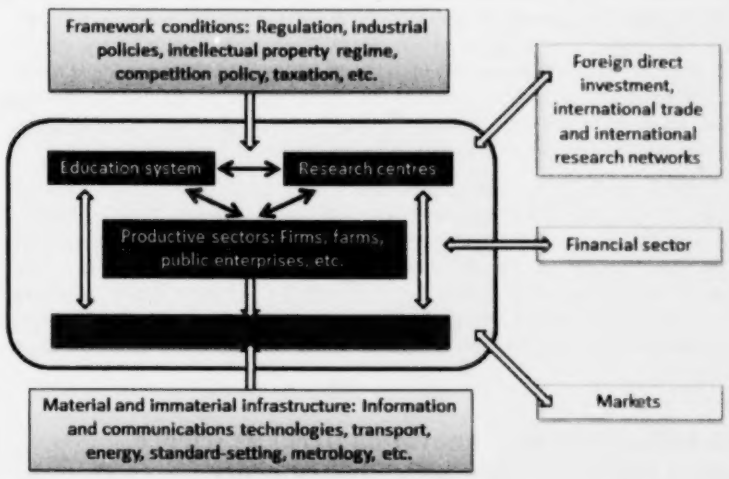
6. In the past, innovation was mainly understood as a linear process, starting with science and moving through applied research and product development to distribution; collaboration between academia and public research organizations[1] and firms was therefore based on a joint interest in commercializing research results, and the key lever for such collaboration was intellectual property. Underlying intellectual property processes correlate

[1] Public research organizations include research organizations and higher education institutions that conduct research and development, funded from public sources as well as from charitable and non-profit foundations. It is a broader term than academia and is used throughout this note.

with the notion of innovation as a linear process.[2] Patenting, copyrighting and licensing have become important mechanisms for knowledge and technology transfer.

7. While intellectual property remains a key factor in collaboration among innovation actors, the deepening of understanding of innovation has resulted in a broader palette of modalities of collaboration. The richness and depth of the interaction that develops in an innovation system is the key to developing absorptive capacities and facilitating the flow of tacit and experiential knowledge. The figure shows how collaboration takes place through multiple linkages among various stakeholders, taking the shape of collaborative research, informal contacts, contracted research, research consortia, seminars, workshops, conferences, technical assistance programmes, licensing, technology and knowledge transfer agreements, consulting, training or permanent research institutions.[3]

A national innovation system


Framework conditions: Regulation, industrial policies, intellectual property regime, competition policy, taxation, etc.
Foreign direct investment, international trade and international research networks
Education system
Research centres
Productive sectors: Firms, farms, public enterprises, etc.
Financial sector
Markets
Material and immaterial infrastructure: Information and communications technologies, transport, energy, standard-setting, metrology, etc.

Source: UNCTAD/DTL/STICT/2013/8.

8. Collaboration can result in direct knowledge and technology transfers when stakeholders coordinate and plan activities such as, among others, joint research ventures or consulting projects and public–private partnerships for research and development. However, indirect and informal channels of knowledge and technology transfer may develop as forms of collaboration that, for example, result in transfers of tacit knowledge, on-the-job training or more formal results such as intellectual property or publications. From a policy standpoint, the effectiveness and efficiency of collaboration in an innovation system is harder to quantify than intellectual property outcomes because knowledge flows can be both direct and indirect. However, the evaluation of collaborative outcomes, in particular between public research organizations and firms, is crucial to developing STI policy such as investing in developing STI parks with the specific aim of stimulating direct and indirect knowledge and technology flows. Chapter III considers the issue of evaluating the performance of STI parks and reviews available evidence of their impact.

[2] JG Goddard and M Isabelle, 2006, How do public laboratories collaborate with industry? New survey evidence from France, Working Paper No. 602, Institute for the Management of Research and Innovation, Paris-Dauphine University.

[3] This list is not exhaustive, as new forms of collaboration are continuously evolving.

9. The traditional argument for Government involvement in science and technology-related research is the existence of positive externalities (e.g. creating knowledge and technology flows, increasing research and development collaboration, improving human capital mobility, etc.) that result in suboptimal private investment in research and innovation. Governments in many countries therefore directly support science and technology-related research through funding or tax incentives and actively manage many public research organizations, including in such areas as health, agriculture and defence. This model remains valid when policy is based on an innovation systems approach, but in this context the existence of systemic failures requires other kinds of policy interventions aimed at establishing and strengthening collaborative linkages and eliminating coordination failures. The individual agents affected by systemic problems often lack the incentive or means to address them.

10. While innovation takes place mainly in firms, they do not innovate in isolation. By moving firms out of their physical and informational isolation, policymakers hope to improve the likelihood of success of innovative products, services or processes. STI parks can resolve two problems with regard to innovation. First, the possibility for scaling up innovation is greater in an environment with numerous potential collaborators and a well-managed infrastructure. Second, operating in proximity with actual or potential collaborators enhances the ability of firms to learn, to increase their absorptive capacity and to develop their tacit and experiential knowledge more quickly and profoundly.[4]

11. STI parks are probably among the most widely used instruments to promote collaboration in STI. Stanford Industrial Park, established on land owned by Stanford University near San Francisco in 1951, is considered the first such park, and played a key role in the development of Silicon Valley. Today, according to the International Association of Science Parks and Areas of Innovation, STI parks are in operation or under development in virtually all developed countries and at least 36 developing countries. Chapter II discusses the shape that this STI policy instrument has taken over time and in various countries.

II. Science, technology and innovation parks as science, technology and innovation policy instruments

A. Defining science, technology and innovation parks and other types of clusters

12. The terms research, science and technology park (STP) or more recently STI park designate a type of specialized cluster aimed at stimulating collaboration between the research system and firms in order to stimulate innovation based on research and development. Such parks have proliferated widely across the world and there is a high degree of diversity in their natures and functions, in part due to their evolution over time. There is no single, standard definition of different types of clusters or STI parks. Because of this, it is difficult to develop precise distinctions of what they are and how they function, although they all share some similarity in purpose. This chapter presents a typology of different types of clusters, focusing on the special nature of STPs.

13. It is useful to place STPs in the broader context of clusters, which are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries and associated institutions in specific fields that compete but also

[4] UNCTAD/DTL/STICT/2011/7.

cooperate.[5] The geographic co-location of firms can create positive economic externalities, referred to as agglomeration economies. Clusters are therefore often referred to as spatial agglomerations of firms and related institutions or organizations. Individual firms are often unable to innovate on their own and require a functioning innovation system or ecosystem and network of firms. Agglomeration economies help explain why firms, particularly small and medium-sized enterprises, often form into clusters to improve their ability to compete and survive. Clusters may form spontaneously through organic patterns of historical development or may be planned or constructed through deliberate policy action by policymakers. They can, but do not always, stimulate knowledge flows, upgrading and innovation among firms located in them.

14. The idea of a cluster is relatively old, but there is little consensus on its definition, which includes many different types of physical agglomerations that differ in both their nature and functioning, including industrial districts or estates, special economic zones and export processing zones.[6] STPs may also be considered a special type of cluster. The earliest clusters developed in the 1950s, notably Stanford Industrial Park and along Route 128 around Boston, while the first STPs in Europe were established in the late 1960s in France and the United Kingdom of Great Britain and Northern Ireland.[7] Since the 1980s, various types of parks have proliferated worldwide, including industrial parks, business parks, research parks, STPs and business innovation centres. The terms innovation park, innopole and techno-city have also been used.[8] In France, the terms technopole and technopolis are used, while in Germany, the term innovation and technology centre is common.[9]

15. Industrial parks are clusters that concentrate on manufacturing, without any specific involvement from universities or public research organizations. The manufacturing may be of any type and does not have to be knowledge or skill-intensive, with research and development as an important basis for production. Business parks co-locate firms that may be involved in a variety of different business activities, without the aim of promoting close collaboration among them but acting more as a real estate venture that provides good infrastructure for general business activity. As with industrial parks, the firms that locate in such a park do not need to be knowledge or skill-intensive in nature.

16. Parks are diverse and do not necessarily conform to conceptual categorizations. The definition of science parks adopted by the International Association of Science Parks and Areas of Innovation states: "Organizations managed by specialized professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions. To enable these goals to be met, a science park stimulates and manages the flow of knowledge and technology amongst universities, research and development institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high-quality space and facilities."[10]

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[5] ME Porter, 1998, *On Competition* (Boston, Harvard Business School Press).

[6] J Potter and G Miranda, eds., 2009, *Clusters, Innovation and Entrepreneurship* (Paris, Organization for Economic Cooperation and Development).

[7] DNE Rowe, 2014, *Setting Up, Managing and Evaluating European Union Science and Technology Parks: An Advice and Guidance Report on Good Practice* (Luxembourg, European Commission).

[8] Ibid.

[9] European Commission, 2008, *Regional Research Intensive Clusters and Science Parks* (Brussels).

[10] Rowe, 2014.

17. A proposal to provide a typology of different parks states that research parks, STPs and innovation centres are all designed as research-intensive locations that focus on using and/or creating knowledge and linking that knowledge to innovation, but that they differ in the extent to which they focus on research, research and development or research, development and design, as well as whether actual production also takes place in the park.[11] Research parks focus largely on research or research and development, with no production in the park. Science parks focus on research, development and design, which includes research and new product and process development and design, while actual production generally takes place elsewhere. For both research parks and science parks, the presence of public research organizations in the park, including research institutions and universities, is critical. Technology parks focus on production as well as research, development and design and host high-technology firms and may or may not include public research organizations. Innovation centres or business innovation centres appear to be a hybrid of STPs that can offer a wide variety of services and focus on high-technology activities. This typology highlights the main common characteristic of STPs: they seek to physically co-locate research and development organizations and firms in order to promote collaboration and innovation in knowledge and skill-intensive activities.

18. There are, however, many variations of these definitions that can be found in different sources. The term science park of the International Association of Science Parks and Areas of Innovation includes science, research and technology parks. The term research park is more prevalent in the United States of America, whereas science park is more prevalent in Europe and technology park is more prevalent in Asia.[12] Some analysts use research, science and technology parks interchangeably or introduce alternative categorizations.[13]

B. Typical features of science, technology and innovation parks

Expected outcomes

19. The goals of policymakers and other stakeholders involved in establishing, supporting and operating STI parks are varied. One study identified the following three: reindustrialization and the creation of new jobs in new industries; regional development; and the creation of synergies that stimulate the creation of new technologies and innovation.[14] The creation of new firms based on high technology has, over time, become a more visible objective, with the increased importance of high-technology production in recent decades. This is often expected to happen through the spin-off of new firms, which can be incubated in a park.

20. Based on a study of 40 science parks in Europe, one study reported that most of the parks included the following among their objectives:

- Facilitate interaction between companies, universities and research centres
- Be a hub for business development policy

[11] P Escorsa and J Valls, 1996, A proposal for a typology of science parks, in: K Guy, ed., 1996, *The Science Park Evaluation Handbook*, Technopolis, Brighton: 66–81.

[12] AN Link and JT Scott, 2007, The economics of university research parks, *Oxford Review of Economic Policy*, 23(4): 661–674.

[13] See, for example, European Commission, 2008, and M Castells and P Hall, 1994, *Technopoles of the World: The Making of Twenty-first Century Industrial Complexes* (Abingdon and New York, Routledge).

[14] Castells and Hall, 1994.

- Provide a favourable environment for the development of local businesses
- Help promote a more modern and dynamic image of the region
- Attract businesses to the park[15]

21. The study also identified several generic aims that are common to most, if not all, science parks, even though they might not be explicitly stated in a park's formal list of objectives, including the following:

- Foster the start-up and/or early growth phase of new high technology-based firms
- Attract existing firms, particularly from outside the region, to establish research and development-intensive activities in the park (not applicable to some science parks that are essentially innovation centres aimed only at the development of new high technology-based firms, which are common in Germany)
- Facilitate technology transfer between organizations in the park, particularly from universities or research centres to firms
- Contribute to the economic development of the region

22. A key goal is likely to be promotion of innovation and technological upgrading and, alongside, increased productivity and an improved competitive position for firms in the cluster. These outcomes flow from the three benefits that can result from the geographical proximity achieved by clusters. First, an increased division of labour in the labour market enables firms to reduce search and training costs. Second, the division of labour in intermediate supplier industries provides firms with access to specialized suppliers of materials and components, finance, marketing, business services, etc. Third, knowledge spillovers take place, such as transfers of knowledge of market opportunities and technologies from both formal and informal links among actors in the park.[16]

23. With respect to STPs, it is likely that the last of these three benefits is a central goal of innovation policymakers in establishing such parks. Fostering linkages and promoting collaboration among research organizations, firms and Government (the triple helix) to generate knowledge flows and spillovers is a common priority of policy intervention in many countries. Inter-firm collaboration is also important in practice, particularly between small and large firms and between firms operating in a common value chain with fragmented production. STPs are often seen as a potentially useful tool for promoting close collaborative linkages.[17]

24. Innovation systems are most effective when such linkages are strong and drive close collaboration. To achieve such an outcome, STPs are expected to develop into dynamic research and development-based local or regional innovation systems. Policymakers should aim to develop a strong innovation system, characterized by a dense and highly integrated network, with strong collaborative linkages and active flows of knowledge (including tacit knowledge) and technologies through technology transfer and diffusion. The universities and other research organizations that are part of an STP are intended to drive such flows of knowledge, as well as create a flow of educated and skilled human capital to firms. Knowledge and skills are likewise intended to flow back in the opposite direction, as well

[15] Escorsa and Valls, 1996.

[16] Potter and Miranda, 2009.

[17] There is substantial literature supporting this view and it has become generally accepted in STI policy. See, for example, the following: European Commission, 2008; P Quintas, 1996, Evaluating science park linkages, in: K Guy, ed., 1996, *The Science Park Evaluation Handbook*, Technopolis, Brighton: 98–111; and Rowe, 2014.

as among firms in the STP. These flows are expected to lead to technological learning and stronger technological capabilities and, as a result, technological upgrading and innovation by firms in knowledge and research-intensive industries. Such innovative firms would create high value-added jobs, translating into higher wages and output, economic growth and structural transformation in the region of a park. This is likely to be the ultimate goal of policymakers that are involved in supporting STPs.

25. In addition to such ultimate policy goals, there is likely to be an intermediate goal of achieving the co-location of a critical mass of firms and research organizations in a park in order to generate the development of dynamic collaborative networks among them, which create dense knowledge flows and trigger technological innovation.

26. The managers and financiers of a park, if they are not purely public sector bodies, are likely to have more commercial goals, concerned with generating adequate return on funds invested and ensuring a certain rate of return, often called the hurdle or minimum rate of return to make an investment profitable, for investment projects in general. This implies related goals such as achieving adequate rates of occupation and new firm entry into the park to generate revenues that contribute to achieving financial goals. There may, therefore, develop tensions between the two general aims in creating and running parks, the commercial aim of the financial viability of the park versus the ultimate policy goal of stimulating effective collaboration and innovation.

27. The wide diversity of goals creates challenges for evaluating the performances of STI parks, as discussed in chapter III.

Role of private and public partners and governance

28. STI parks are often considered an important part of regional-level STI policy, as opposed to national-level STI policy, although parks may represent a national-level policy issue for small countries. They may also be a part of national STI policy in countries that are large enough to have substantial regionally based policymaking and institutional development. Given the potential interest of different levels of government in STI parks, public bodies at the national, regional or local level are usually involved in the ownership and financing of parks to a greater or lesser extent.

29. There are many models of ownership and wider governance of STI parks and no truly typical model. In the European Union, around 55 per cent of STI parks are publicly owned, including by local government, regional government and universities. Mixed public–private ownership structures account for slightly more than 30 per cent of parks. These mixed structures typically include local government, universities and private firms. Privately owned parks represent over 14 per cent of parks in the European Union, with private firms and private universities both involved as owners.[18] Management is often via a private management company, but they may also be managed by a university that is a part owner or by a public body or a foundation. Financing arrangements for STI parks are likewise diverse, with both public and private sources being the norm. A survey of parks in the European Union reported that they rated all of the following as very important sources of funding: the European Commission; regional organizations; national Government; local government; universities or research and technology organizations; and banks. Public financing may also take place to support incubators in a park. In addition, STI parks and incubators themselves may provide financing for firms locating in a park, which may be in part public financing. Public financing is also often provided indirectly through the

[18] Rowe, 2014.

financing of research and development at universities and other public research organizations.

30. STI parks that are privately owned and/or operated are more likely to be run as real estate businesses that seek not only to create linkages, collaboration and knowledge flows, but also to earn revenues from property rental and service fees. One study reported that the approach to STI parks varied between the United Kingdom and a group of other European countries: in the United Kingdom approach, parks were fundamentally a real estate operation selling quality sites in a high-technology environment to companies that require such sites, whereas in countries such as France, Greece, Italy, Portugal and Spain, they were viewed as instruments of regional development.[19] As a result, there was more public sector participation in the ownership and support of parks in the latter. The public financing of research and development may be structured in such a way as to incentivize collaboration by research organizations with firms.

31. There is also a wide diversity in the nature of firms that operate in STI parks. Tenants of parks in the European Union are dominated by micro and small and medium-sized enterprises in terms of the number of firms.[20] Most firms that locate in parks in Europe are from the same country, with some 8 per cent being transnational corporations. Most (71 per cent of the total) of the same-country firms are local and the rest are regional (12.9 per cent) or national (16 per cent) firms. In developing countries, parks often aim to attract transnational corporations to locate in a park alongside local firms. The main technology sectors represented in European parks are, in descending order, information technology and/or communications, biotechnology, computers and/or informatics, energy, Internet technologies and services and software.

III. The contribution of science, technology and innovation parks to innovation policy and overall development

A. Park operations and science, technology and innovation policy objectives

32. STI parks are increasingly seen as important targets for public sector support in terms of policy and funding. One reason for their growing popularity is that STI parks provide highly visible means to signal commitment to supporting technological innovation leading to better competiveness and increased employment. In this regard, it has been acknowledged that there is a strong link between economic diversification and national innovation capacity and successful STI park projects.[21]

33. The focus of the contribution of STI parks to development strategies has moved from providing quality infrastructure, to attracting technology businesses, to becoming a major element of STI policy and hence of development policy in general. In the past, the major concerns for park operators were making land available, financing the building of parks and their infrastructure and providing financial easing for tenants through fiscal incentives and subsidies. Today, an increasing number of policy concerns are raised. Policymakers need to distinguish between two sets of policies, a primary set directed at STI parks themselves and a secondary set meant for parks to pursue vis-à-vis their partners and tenants.

[19] Escorsa and Valls, 1996.
[20] Rowe, 2014.
[21] Ibid.

34. With regard to the primary policy set, policymakers need to consider issues related to the following four key areas:

- Policy coherence: There should be a close alignment between the national development strategy, the national innovation policy and the sector profile of a park. This requirement is often difficult to achieve due to inconsistent linkages among various policymakers at various levels of government and their differing time horizons and sets of incentives.
- Financial sustainability: A decision should be made early on about the sustainability and independence of a park, and a governance framework developed supporting the intended financial outcome. At the outset, an STI park requires public funding to attract tenants and establish partnerships. In the long term, financial autonomy is desirable, though not at the expense of giving a low priority to the innovation-nurturing role of the park. Public investment in STI parks should look for medium to long-term returns. Policymakers therefore need to be well-informed and understand the factors that can affect the performance of a park during its life cycle.
- Outreach: STI parks should make their tenants more attractive to national and international partners. Doing so depends not only on the actual innovation quality of an STI park's activities but also on the public relations and marketing activities of the park in its entirety.[22] Partnership capacities, logistics, infrastructure, regulatory and administrative facilities and incentives may be offered and need to be actively and successfully promoted. International partnerships may be developed with foreign firms and multinationals and with public research organizations and private research firms, given the increasing internationalization of research and development activities.[23] Regional and South-South cooperation may help develop complementary capacities. Differentiation and the development of a competitive advantage and unique profile may also be a worthwhile policy objective.
- Tenant funding: Innovation is risky and uncertain and entrepreneurs that cannot secure funding may see the knowledge competencies they have assembled dissipate quickly. The uncertainty of innovation outcomes is an important disincentive for traditional financial institutions seeking investment opportunities. As a result, innovative firms experience high costs of capital that are only partly alleviated by venture capital.[24] Venture capital itself depends on the existence of a well-functioning equity market in which it can divest its venture when it matures, and this may not be available in many developing countries. Therefore, financing of the activities of park tenants may need to rely on public investment vehicles or funding developed through public–private partnerships. The actual form of funding may be diverse and should be appropriate to the recipient firm and its innovative proposition and may include, for example, seed funding, the secondment of staff from public research organizations or loan guarantees.

35. With regard to the secondary policy set, STI parks should develop the following three areas:

- Tenant selection: Tenants are normally selected from a priority sector and from a technology or knowledge-based sector or industry. Selection will involve

[22] H Tcheng and J-M Huet, eds., 2012, Of science parks and men: Cities, the catalysts for development in emerging markets, Convergence Letter, BearingPoint Management and Technology Consultants.

[23] UNCTAD, 2005, *World Investment Report* (New York and Geneva, United Nations publication).

[24] BH Hall and J Lerner, 2009, The financing of research and development and innovation, Working Paper No. 15325, National Bureau of Economic Research.

encouraging local universities and public research organizations to cooperate and even become tenants. Knowledge and technology transfer can take many forms and may produce relationships that are founded in legal instruments such as intellectual property and non-disclosure agreements. Establishing and managing these tend to require a sophisticated set of skills; tenants may need to be guided and STI parks need to provide expert advice on intellectual property. Another important consideration is assessing the absorptive capacity and overall competency of tenants, in particular regarding entrepreneurship and management skills.

- Incubation: business incubation facilities and support are needed in order to increase the chances of innovations maturing into commercial products and services. This means that there may be a need to provide on-site business support services. STI parks need to have their own business development competencies that can develop cooperation and linkages with regional and national markets and international value chains and can guide tenants in the economic discovery of the commercial potential of their innovations. It is unlikely that there will be many tenants with meaningful revenues and profits during the early stages of establishment and policies on terms and conditions for tenants may need to reflect this reality.

- Capacity to assess innovation outcomes: STI parks need to identify themselves as agents in a national innovation system and move substantively beyond acting as landlords. STI parks need to look closely at how they and their tenants integrate with other STI stakeholders and need to reference their success to strategic social and economic targets as defined in a national development policy, such as, for example, the creation of highly qualified jobs and new technology businesses and sectors and the strengthening of export sectors and participation in international value chains.

B. Performance dimensions and science, technology and innovation policies

36. The metrics for judging the performances of STI parks are not straightforward. Success is generally assessed by comparing performance against a park's objectives and these may be numerous and diverse. The assessment of actual performance against stated objectives is problematic for at least three reasons. First, it is likely that the objectives of some parks will be poorly defined or even contradictory. Second, different parks are likely to have different sets of objectives with different emphases or weightings, reducing the possibility of comparing experiences. Third, data measuring positive externalities can be difficult to establish.[25] In addition, measurements and comparisons of outcomes can be deemed rigorous only if there is a control group where policies on STI parks are absent.

37. Performance indicators for STI parks often amount to easily measurable indicators of commercial feasibility. Innovation system and qualitative indicators, such as the development of linkages and collaboration or technological upgrading and innovation, are not always included. Nevertheless, basic indicators may include the following:

- Area of land under development in hectares and building space constructed in square metres, a measure that is particularly prominent in the early years of an STI park's development

- Number of companies located in the park and number of people they employ (additional information may relate to the type of employment created and the number of qualified scientists and engineers employed)

[25] Escorsa and Valls, 1996.

- Number of companies that have graduated from the park and their employment numbers
- Rental and services income per month, per year and over time
- Type and range of common services provided by the park, such as broadband telephony, videoconferencing, meeting rooms, secretarial support, networking events, virtual accommodation address facilities, etc.
- Type and range of professional services provided either directly by the park management itself or indirectly by others encouraged by the park management to offer these services, such as bookkeeping and accountancy, mentoring, access to finance, marketing support, public relations support, general business advice, technology transfer facilitation and networking with the knowledge base
- Funding for capital and operational purposes raised and spent
- Inward investment projects attracted to the region by the park itself and/or in cooperation with others such as inward investment attraction bodies or regional development agencies

38. Other success criteria may include survival rates of tenant firms, whether research linkages are more likely to form with on-site or off-site firms and the impact of a park on overall employment growth, university publication and patenting activity. These may be developed with reference to an off-site control group of firms. Surveying the motivations of firms to locate in a park may also develop useful insights.

39. A number of studies have reached mixed conclusions. One study established that a large percentage of STI parks in the United States either ended as outright failures or contributed little to economic objectives, reporting that only 25 per cent of STI parks in the United States achieved their goal of attracting and fostering research and development activity, contributing to job creation and economic growth, while another 25 per cent became purely real estate operations that contributed little to economic objectives and 50 per cent failed.[26]

40. Another study suggested that the ability of STI parks to develop linkages between higher education institutions, such as universities and colleges, and firms was the key criterion by which to judge their success.[27] A major determinant of a firm's decision to locate in an STI park hosted by a public research organization is to acquire access to scientists at the university and research facilities, and the largest development impact in regions in which STI parks locate is therefore likely to be growth in research and development activity. As weak linkages and interactions among STI stakeholders is a common systemic failure, in developed and developing countries, fostering linkages and promoting collaboration are generally high priorities of an STI policy. Promoting the technological upgrading of firms is another common goal of STI policy. When collaborative networks are forged and information, knowledge and technologies flow quickly due to physical proximities in STI parks, technological learning can enhance technological and innovation capabilities.

41. More recent studies indicate that the main contributions of STI parks are in the creation of high-quality employment and new technology businesses and in the

[26] M Luger and H Goldstein, 1991, *Technology in the Garden* (Chapel Hill, University of North Carolina Press).

[27] P Westhead and S Batstone, 1998, Independent technology-based firms: The perceived benefits of a science park location, *Urban Studies*, 35(12): 2197–2219.

establishment of national or regional visibility for technology and innovation.[28] Technology transfer from academia to firms is also noted as an important outcome and is a result of the types of linkages that STI policy aims to create through STI parks. However, linkages may take many forms and are difficult to detect, for example the transfer of tacit knowledge.

42. A central issue for policymakers is distinguishing the measurement of processes versus outcomes. Linkages are the means of achieving desired outcomes and are indicators that innovation processes are active. Whether an STI park can assist its tenant firms to generate commercial innovation outcomes is linked to but not directly contingent on such processes. Finally, there is the issue of the time horizon of evaluations; certain criteria require a long-term assessment while others may be examined on an immediate or regular basis. One study suggested that, given the difficulty of detecting and evaluating linkages at any given time, there was a case for combining process-oriented evaluation that focused on measuring the development of collaborative linkages with the assessment of outcomes that were achieved in terms of outputs and impact.[29] However, actually implementing such evaluation remains a major challenge.

C. Challenges in evaluating science, technology and innovation parks and related policies

43. The time horizon problem of evaluating STI parks is further complicated not only by the fact that certain outcomes materialize in the future but that major costs and investments are incurred in the early stages of a park's lifespan. At the outset, the largest cost item is generally the real estate purchase and infrastructure development. However, funding may be required throughout a park's development. Income streams that emerge over time may gradually begin to contribute, as compensation for high up-front expenses. Based on purely financial indicators, it is unlikely that STI parks can be managed as profitable business investments, as their goals are generally more complex and related to realizing positive externalities that would otherwise be lost without their activity. The mix of public–private financing during the lifespan of a park is likely to change, with private investment gradually increasing and eventually, as the park reaches maturity, becoming the dominant source.

44. With regard to the development of linkages and collaborative networks, a short-term time horizon is inadequate in evaluating performance or outcomes. Collaborative processes require time to develop and consolidate, as a culture of cooperation builds and the level of trust needed for close partnerships is created. Regardless, evaluation data must be developed and recorded as a time series, on a continuous basis from the date that a park is set up.[30] A unique data set at a national or regional level allows for comparisons among parks at different points on their development curve even if this means confining collection to information that can be easily accessed from the records of an STI park and its tenants, often including, for example, financial performance information and data on the numbers and types of businesses in the park that are starting up, closing down or leaving.

45. Another important concern is the fundamental mismatch between the relatively long term that an STI park and its first tenants need to become commercially viable and the shorter time horizons of Governments and administrations during which they propose and commit to attaining certain economic growth and social development targets. If an STI park requires 10 or 20 years before it develops commercial potential, there will in the meantime

[28] Rowe, 2014.

[29] Quintas, 1996.

[30] B Hogan, 1996, Evaluation of science and technology parks: The measurement of success, in: K Guy, ed., 1996, *The Science Park Evaluation Handbook*, Technopolis, Brighton: 86–97.

be a need for public financing and policy support that may extend over several political administrations, and policy continuity may become an important challenge. Therefore, any evaluation will need to judge data and surveyed information against the background of an assessment of policy continuity, including the continuity of funding commitments as well as broader policy support over the long term.[31]

46. In addition to challenges concerning the time horizon, there is an issue of additionality, that is, the extent to which any positive changes that an STI park tenant has experienced may be attributed to being located in the park. At the regional or national level, benefits in the locality of a park must be weighed against losses and opportunity costs experienced by tenants due to their relocation from other sites.[32] Such costs and losses need to be set against any benefits from developing close linkages with tenant public research organizations. Assessments therefore need to recognize the cost of both existing linkages and severed previous linkages. The need for a control sample of firms located outside STI parks is once again evident, and it has been suggested that a full assessment of additionality would benefit from a representative survey of businesses not located at an STI park as a control group.[33]

47. However, conducting policy research with a control group can be difficult, as developing a representative sample of firms with a similar mix of technology or knowledge-based products and services is challenging, while persuading the same firms to take part in a survey that has no direct benefits for them may be ineffective. The solution would be to establish well-defined but simple metrics backed by convincing and overwhelmingly supportive policy leadership.

D. Science, technology and innovation park-related challenges in developing countries

48. The experiences of several developing countries, as noted in the UNCTAD work programme on STI policy reviews, suggests that while STI parks have become a popular instrument for supporting innovation, a strong policy commitment requires a number of supporting conditions, including the existence of knowledge and technology leaders, in the form of universities, research and development institutions and private firms or, alternatively, the ability to attract foreign technological firms. A national policy formulated as an innovation system strategy, with appropriately developed cooperative linkages and incentives attracting and supporting high-technology firms, is another key condition.[34]

49. Such conditions are not easy to meet in developing countries. For example, a review of STI parks in Latin America shows that most need to increase their sizes, strengthen their bases of advanced knowledge institutions or high-technology firms and increase their efforts to encourage technological cooperation among firms located in them.[35]

50. The management of an STI park should aim to outgrow its role as a provider of infrastructure and move on to developing competencies assisting the incubation of new technology-based firms, thereby supporting the development of regional and sectoral innovation systems with sustained linkages to local public research organizations, firms and industries. For example, in Latin America, the most dynamic STI parks exhibiting higher

[31] Rowe, 2014.
[32] Quintas, 1996.
[33] Rowe, 2014.
[34] A Rodriguez-Pose, 2012, *Los Parques Científicos y Tecnológicos en América Latina* (Washington D.C., Inter-American Development Bank).
[35] Ibid.

levels of technological content are those located close to the best universities in the region, in cosmopolitan areas that can provide a critical mass of high-technology firms. Reverse developments have also been noted, as STI parks can become enclaves with limited linkages to the local economy or technology transfer towards domestic industries.

51. Finally, there is a need to establish a distinction between an industrial estate and an STI park. From a development perspective, they may be more similar than in a developed market economy context. However, the policy framework and support for STI parks must be distinct and focused, as the sought outcome is of a completely different quality.

52. Recent case studies in the context of the UNCTAD programme on STI policy reviews in developing countries and issues worth considering are described in the following paragraphs.

Thailand

53. The Government has established several STI parks since the late 1990s. Thailand Science Park, launched in 1996 in the northern suburb of Bangkok, is the most advanced, and hosts four national high-technology research centres (Nanotec, Biotec, Mtec and Nectec) with 1,800 researchers, of which 480 have PhDs. Sixty tenant enterprises, with about 500 staff members, 60 per cent of which are research and development personnel, are located in the park. Tenant firms largely work in research and development related to the fields of the four national research centres. Around 20 tenants are electronics and computer firms, 13 are biotechnology firms and 27 are in the metal and material industry. The park also includes the Business Incubator Centre, an incubator to facilitate the growth of small innovative businesses, which has incubated 74 start-ups and supported research and development projects in a number of established firms. In addition, the park offers innovation-related services such as intellectual property management and technological services, and is host to three universities and one medical school. The park has provided Thailand with a well-developed physical research and development infrastructure, yet has been less successful in supporting and attracting private research and development efforts and incubating research and development firms. Phase II of the park was opened in 2014, but there have been difficulties in attracting firms to the park, as many prefer more central locations in Bangkok.

54. In addition to public efforts to establish STI parks, private efforts such as Amata Corporation's Science City have also supported the establishment of scientific poles in large private industrial estates.

Dominican Republic

55. Technological parks have been promoted by law (No. 392-07, 2007, on competitiveness and industrial innovation) as one of three instruments to support innovation and technological development in the country. However, according to an innovation survey conducted in 2010 and interviews carried out in the context of the STI policy review, the development of technological parks as a place for the development of prototypes and for conceptualizing ideas before creating companies and bringing them to the market is still very limited.[36] The law provides tax exemptions, offering clear incentives for the renovation of equipment and machinery, but is insufficient on its own in promoting the creation and local adaptation of technology. Activities have been focused mainly on the promulgation of a legal framework that promotes these industrial areas. With the exception of Parque Cibernético in Santo Domingo, progress still needs to be made in promoting

[36] UNCTAD/DTL/STICT/2012/1.

innovation or transferring technology within the established industrial parks. A fundamental policy challenge is changing the understanding of the parks, as STI parks rather than industrial enclaves, with the implementation of the requisite strategies for linking them with other companies in the Dominican Republic.

Oman

56. An important part of Oman's industrial activities takes place in eight industrial estates and free zones. A recent development has been the establishment of a ninth high-technology industrial estate, located near Muscat close to Rusayl Industrial Estate, Innovation Park Muscat and Sultan Qaboos University. Opened in 2003, Knowledge Oasis Muscat is Oman's flagship technology park, and its objectives are to develop public–private partnerships nurturing knowledge-based businesses while remaining focused on promising entrepreneurs and small and medium-sized enterprises. The park hosts more than 60 firms and provides office and business incubator accommodation to technology-oriented businesses, including technology start-ups. The STI policy review noted that links and synergies with academia may benefit from further development and that developing the presence of foreign companies with significant research and development activities would be beneficial.[37] Education is another key factor, and additional graduates with competencies relevant to industry are needed. Linkages are underdeveloped, and industry may need to increase its participation and influence in curriculum development for schools and universities, while improving cooperation with public research organizations on research and development and technology adaptation and innovation.

57. Efforts are being made to set up small and medium-sized enterprise incubators, such as in the Salalah Free Zone. Many requests for incubation come from entrepreneurs with academic knowledge but modest entrepreneurial and practical experience, and training is provided to remedy this. Small and medium-sized enterprise start-ups require more than physical space, and STI park management needs to improve access to advice, coaching and contact with venture capitalists.

58. The Government is expending significant efforts to strengthen linkages underlying the innovation system and STI park development policy. In this regard, facilitating engagement in international collaboration with foreign firms and public research organizations is an area where cross-cutting policy action needs to match efforts at physical clustering and where the innovation system strategy – being developed at the time of preparation of this note – is expected to offer improved results.

IV. Conclusion

59. The outcomes of STI parks as innovation policy instruments present a varied picture. Among other factors, where a proactive STI policy is in place, clear strategic goals have been identified and effective engagement with the local knowledge base has been established and nurtured and commitment maintained over reasonable time horizons, there is evidence of successful outcomes related to the generation of innovation-led economic activity, gains in competitiveness and better employment. However, many STI park initiatives must address challenging STI environments, in terms of technological capabilities, business environments and financial stability. Given the sophisticated skills involved in starting up a complex system of multiple knowledge and business interactions, it is to be expected that the operation of a certain number of STI parks has tended to focus

[37] UNCTAD/DTL/STICT/2014/1.

more on immediate financial considerations (i.e. operation of a park as a real estate undertaking) rather than on long-term innovation outcomes.

60. Particularly in developing countries, where innovation systems present well-known weaknesses, it is important that the Government and other actors considering investing in the establishment of STI parks be able to draw on solid evidence of good practices in STI park design, governance and operation. Areas in which such evidence would be particularly useful, and which the Investment, Enterprise and Development Commission may wish to consider in its discussions, include the following:

- How should a tenant selection policy for STI parks be defined and fine-tuned?
- Should STI parks respond to priorities linked to the development of new industrial sectors or focus on existing local economic structures?
- What are the most successful models of public–private partnerships in the operation of STI parks?
- What are the managerial and STI-related skills that the management of STI parks need to focus on?
- What are the main dimensions along which the performance of STI parks should be measured and what indicators are best suited for this?

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Report of the Investment, Enterprise and Development Commission on its seventh session

Held at the Palais des Nations, Geneva, from 20 to 24 April 2015

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I. Agreed conclusions

The Investment, Enterprise and Development Commission,

Recognizing the constructive and fruitful deliberations at its seventh session, and

Mindful of the special circumstances for this session in light of the preparations for UNCTAD XIV,

1. Takes note of the work of the various expert group meetings held under the aegis of the Commission and looks forward to their continued contributions to synergizing the three pillars of UNCTAD;

2. Notes with appreciation the programme of Investment Policy Reviews and underlines the usefulness and the positive impact of the intergovernmental peer review process in this regard;

3 Recognizes the work of UNCTAD in the areas of science, technology and innovation, and in investment and enterprise, and the importance of such work in strengthening the capacity of developing countries to address key development challenges.

II. Chair's summary

A. Opening statements

1. The Deputy Secretary-General of UNCTAD made the opening statement, which was followed by those of the following delegations: the Philippines, on behalf of the Group of 77 and China; the Bolivarian Republic of Venezuela, on behalf of the Group of Latin American and Caribbean Countries; the United Republic of Tanzania, on behalf of the African Group; the European Union, on behalf of the European Union and its member States; Albania, on behalf of Group D; Benin, on behalf of the least developed countries; Paraguay, on behalf of the landlocked developing countries; Ecuador; Morocco and China.

2. The Deputy Secretary-General stressed the need for private sector involvement, guided by a set of principles, to help bridge the development financing gap, which had been identified by UNCTAD in the *World Investment Report 2014*.[1] The Report proposed an action plan to mobilize and channel resources within the global financial system for investment in sectors that are particularly important for sustainable development.

3. Foreign direct investment (FDI) played a key role in financing development, and UNCTAD Investment Policy Reviews helped countries attract investment that was conducive to sustainable development. Similarly, entrepreneurship and policy tools such as the Entrepreneurship Policy Framework developed by UNCTAD were means to pursue sustainable development goals in the post-2015 agenda.

4. Technology and innovation were not only drivers of economic growth but essential components of a post-2015 development agenda. It was important to stimulate collaboration through science and technology parks, clusters and business incubators to promote learning and the dissemination of knowledge.

[1] UNCTAD, 2014, *World Investment Report 2014: Investing in the SDGs–An Action Plan* (New York and Geneva, United Nations publication, Sales No. E.14.II.D.1).

5. Many groups emphasized the importance of sources of financing, including private sector contributions, in working towards the sustainable development goals and praised the *World Investment Report 2014* for its relevance, analysis, strategic policy framework and tailored action plans focusing on sectors for sustainable development for individual countries. They endorsed the central message of the report: that progress on sustainable development would require a partnership with the private sector and civil society.

6. The representative of one group recognized the importance of establishing an enabling international environment, in particular by developed countries. By providing relevant policy frameworks and incentives, it would be possible to increase flows of finance and investment to developing countries, scale up technology development and transfer, set up a fair and pro-development international trading system and enhance the participation of developing countries in global financial and economic governance. It was particularly important to stand by the commitment of allocating 0.7 per cent of gross national income to official development assistance. Better yet, developed countries should aim for 1 per cent by 2030.

7. She said that, in view of the importance of FDI for development, it was essential to ensure capacity-building, financial support and investments for developing countries, especially in least developed countries, landlocked developing countries and small island developing States. UNCTAD technical assistance in FDI statistics, capacity-building for negotiators of international investment agreements and awareness-raising for policymakers was a tool for effective investment policymaking. Private investment in agriculture was necessary to enable growth, poverty reduction and access to technology in developing countries. However, one should not lose sight of the legitimate concerns of countries and communities with regard to the social, environmental and economic impact of such investment. UNCTAD should continue and further expand its technical assistance programmes and put in place sound polices for sustainable development by promoting investment and developing a dynamic private sector.

8. All groups underscored the usefulness of UNCTAD investment trends and forecasts. One representative called for additional resources to support this work, particularly to help build capacity on data collection in developing countries. Similarly, some groups emphasized the need for UNCTAD to continue analysing issues related to the promotion of investment for sustainable development. The representative of one group commended the Organization's work in the area of FDI in agriculture and related sectors, in particular its work on the Principles for Responsible Agricultural Investment that respects rights, livelihoods and resources; she stressed its importance in alleviating poverty by generating exports and employment, and connecting developing countries to markets through global value chains. Another representative singled out an UNCTAD report on the gender dimension in the operations of transnational corporations in developing countries[2] and called on UNCTAD to expand this work to the apparel industry, financial services and agriculture.

9. With regard to the role of investment for development, some groups welcomed the contribution of the Investment Policy Reviews, whose tailored policy recommendations helped countries create an enabling environment to attract FDI and maximize its positive economic and development impacts. A few delegations called on member States to increase donor support to enable this important work to continue.

[2] UNCTAD, 2014, *Investment by TNCs and Gender: Preliminary Assessment and Way Forward* (New York and Geneva, United Nations publication).

10. In the area of investment policy, the absence of a multilateral governance structure to steer reforms in the international investment agreement system was a source of concern for several groups. Many delegations noted the valuable work on reform in international investment agreements, which had been spearheaded by UNCTAD. They welcomed its efforts to provide a multilateral forum for countries to discuss such options and build consensus among them and praised its proactive approach in designing a road map for reform. A few delegations welcomed the timely expert meeting held by UNCTAD in February on such reform. Recognizing the lack of technical expertise to address those reforms, many delegations said that the UNCTAD Investment Policy Framework for Sustainable Development could help facilitate reform efforts.

11. Building on the Deputy Secretary-General's comments, many delegates reiterated the importance of active policies and dedicated resources for fostering entrepreneurship. Several representatives emphasized the differential needs of women and youth that should be recognized when promoting entrepreneurship. Several delegates commended UNCTAD for its work in building entrepreneurial expertise through the Empretec and Business Linkages programmes and the Entrepreneurship Policy Framework. In the view of three groups, the Framework was a useful tool to assess and review enterprise competitiveness and foster productive capacity in developing countries. In the area of technical capacity-building, one delegate praised the work of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting and the usefulness of the UNCTAD Accounting Development Tool.

12. With regard to science, technology and innovation, a few groups welcomed the UNCTAD report to the Commission on the role of policies to promote collaboration in this field. Several groups noted that science, technology and innovation had a crucial role in enabling developing countries to achieve economic growth, generate better employment opportunities and address environmental challenges. One delegation stressed the importance of continuing with the exchange of experiences and mutual learning about science, technology and innovation policies and of accelerating the expansion of science, technology and innovation in developing countries.

13. The Director of the Division on Investment and Enterprise presented the latest investment and entrepreneurship data and trends. While flows of FDI were estimated to have fallen in 2014, there was reason for optimism: at the regional level, four of the five top recipients of FDI inflows were in developing countries, with developing countries receiving a record 56 per cent share of global FDI.

14. Noting a continued dichotomy in investment policymaking at both the national and international levels, he said that the trend at the national level in 2014 towards greater liberalization was greater than it had been in the previous two years, with 86 per cent of measures favourable to investment.

15. There had been a decline in the number of international investment agreements signed by countries, down from 44 in 2013 to 28 in 2014, bringing the total to 3,300. Countries were pursuing different paths of engagement with the international investment agreement system, which was affected by several processes, including the negotiation of mega-regional agreements. With regard to investor–State dispute settlement, the number of cases had grown to 608 known cases in 2014, fewer than in each of the previous two years. More than 100 Governments had faced at least one investor–State dispute case.

16. Noting that the United Nations General Assembly had recognized the role of entrepreneurship in sustainable development, he said that entrepreneurship development was critical in reducing poverty and promoting gender equality, social inclusion and environmental sustainability. In this regard, UNCTAD had collaborated with the

Commonwealth to develop a comprehensive national framework on youth entrepreneurship.

17. The Director of the Division on Technology and Logistics briefed the Commission on recent developments concerning science, technology and innovation for development. It was gaining visibility in addressing global challenges, particularly as a key component of the post-2015 development framework. For example, the Synthesis Report of the Secretary-General on the Post-2015 Agenda, the Report of the Open Working Group on Sustainable Development Goals and the zero draft of the Addis Ababa Accord on financing for development had devoted ample space to such issues.

18. She further briefed the Commission about the work undertaken by UNCTAD in support of the Commission on Science and Technology for Development. She referred to the development implications of the priority themes of its eighteenth session, "Strategic foresight for the post-2015 development agenda" and "Digital development". UNCTAD had recently prepared a report[3] to assist the Commision in its ten-year review of the implementation of the outcomes of the World Summit on the Information Society. The outcome of the review would be submitted to the General Assembly by the Economic and Social Council later in 2015. It would also form a substantive input to the overall review of the Summit to be conducted by the General Assembly in December.

B. Reports of expert meetings

(Agenda item 3)

1. Report of the Multi-year Expert Meeting on Investment, Innovation and Entrepreneurship for Productive Capacity-building and Sustainable Development on its third session

(Agenda item 3(a))

19. The Chair of the third session of the Multi-year Expert Meeting on Investment, Innovation and Entrepreneurship for Productive Capacity-building and Sustainable Development presented the report of the session. She underscored the importance of a coherent and comprehensive policy approach to entrepreneurship development to achieve inclusive sustainable growth and, towards this end, the need for an entrepreneurship policy framework. Policy guidelines should also be developed to support entrepreneurship in the green and social sectors, and for targeted groups such as women and youth entrepreneurs.

20. The meeting had highlighted the role of business linkage programmes to engage transnational corporations with local small and medium-sized enterprises through their value chains. The Chair of the expert meeting praised the pitching event between young entrepreneurs and investors as a useful opportunity to learn first-hand from the experiences of young entrepreneurs and hear their ideas about embedding entrepreneurship in national education curricula and the need for support and legislation to cope with entrepreneurship resilience and failure. She also welcomed the adoption of the resolution on entrepreneurship for development by the General Assembly and the positive impact it would have on the post-2015 development agenda.

21. The Commission took note of the report contained in document TD/B/C.II/MEM.4/9.

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[3] UNCTAD, 2015, *Implementing WSIS Outcomes: A Ten-Year Review* (New York and Geneva, United Nations publication).

2. Report of the Expert Meeting on the Transformation of the International Investment Agreement Regime: The Path Ahead
(Agenda item 3(b))

22. In his report on the Expert Meeting on the Transformation of the International Investment Agreement Regime: The Path Ahead, the Chair of the expert meeting stressed the session's importance in exploring ways to reform the international investment agreement regime and the investor–State dispute settlement mechanism, with a view to fostering sustainable development. Different paths towards reform of the international investment agreement regime would have implications at national, regional and international policy levels. Given the complexity of the system and the long-term nature of such agreements, a step-by-step approach towards reform was preferable. Participants had expressed appreciation for the organization of the expert meeting by UNCTAD, as well as the innovative format of the meeting, which had promoted more interactive discussions. There was a need for joint, coordinated multilateral efforts to pursue effective and comprehensive reform of the regime and for an action-oriented road map for reform that would take into account the interests of all stakeholders. UNCTAD was ideally positioned to play the role of a multilateral focal point for the sharing of experiences on issues related to such reform.

23. The Commission took note of the report (TD/B/C.II/EM.4/3).

3. Report of the Expert Meeting on Cyberlaws and Regulations for Enhancing E-commerce, including Case Studies and Lessons Learned
(Agenda item 3(c))

24. The representative of the Chair of the Expert Meeting on Cyberlaws and Regulations for Enhancing E-commerce, Including Cases Studies and Lessons Learned, presented the report of the meeting. She highlighted the transformational impact of e-commerce, underscoring the importance of adequate policy responses. She encouraged member States to consider how information and communications technology (ICT) and e-commerce could best be addressed as a means of facilitating international trade and implementing sustainable development in preparation for the fourteenth quadrennial conference of UNCTAD.

25. The delegate of one group, endorsed by another, thanked UNCTAD for its part in organizing a regional workshop on cyberlaw harmonization for e-commerce in Latin America and the Caribbean in Guayaquil, Ecuador, and for its continuous support in providing capacity-building training in e-commerce in the region. The expert meeting had helped enrich capacity-building by sharing experiences with other regions. One delegate urged UNCTAD to develop a new indicator that would assess the level of preparedness of countries to undertake e-commerce and enable comparisons with a catalogue of best practices in this field.

26. The Commission took note of the report contained in document TD/B/C.II/EM.5/3.

4. Report of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting on its thirty-first session
(Agenda item 3(d))

27. In his presentation of the report of the thirty-first session of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR), the Chair of that session noted that more than 280 participants from 80 countries had attended. The Group of Experts had adopted the agreed conclusions and suggested two main agenda items for next session: key foundations for high-quality reporting: International audit and assurance requirements and good practices on their implementation;

and review of good practices on enhancing the role of corporate reporting in attaining the sustainable development goals. In response to increasing interest by member States, UNCTAD was organizing a technical workshop on the practical implementation of International Public Sector Accounting Standards.

28. The Commission took note of the report of the thirty-first session of ISAR contained in document TD/B/C.II/ISAR/71 and approved the provisional agenda that the Group of Experts had proposed for its thirty-second session.

C. Mobilizing investment for development: Contribution of UNCTAD in the context of financing for development

(Agenda item 4)

1. High-level segment

29. The meeting discussed three inter-related issues: financing for development; the need to mobilize and channel investments to sustainable development sectors, including the role of the private sector, and the contribution of UNCTAD to investment for sustainable development and its potential role in the post-2015 development agenda.

30. In his opening remarks, the Director of the Division on Investment and Enterprise underlined the scale of investment needs implied by the sustainable development goals. The public sector alone could not finance the goals. However, private sector resources were available to complement public funding, and it would be necessary to strike a balance between different sources of external financing. There was a need for cooperation and partnership among stakeholders to ensure the mobilization and channelling of funds to effectively deliver on commitments to the goals. To support this process, targeted policies were required to reorient the different sources of financing towards investment in sustainable development. UNCTAD had contributed to supporting policies in that area through the Investment Policy Framework for Sustainable Development, the Entrepreneurship Policy Framework, the Sustainable Stock Exchanges Initiative, the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting and the Principles for Responsible Agricultural Investment.

31. The panellists acknowledged the challenge posed by the scale of investment needs for the sustainable development goals and the current financing gap. One panellist stated that while public finance would continue to play an important role, it would require greater international cooperation: there should be more engagement and participation by developing countries in international discourse and decision-making processes in many areas, including international tax cooperation. Another panellist highlighted the need for greater collaboration among Governments, the private sector, institutions and other stakeholders to address issues of financing for development.

32. Several delegates pointed out the critical challenges faced by some developing countries in attracting FDI, an important source of development finance. These included insufficient infrastructure and an unattractive investment environment. With that in mind, UNCTAD should extend its technical cooperation to countries to help them create or improve an enabling environment to attract investment. Special assistance to post-conflict countries was also important.

33. Many delegates had praise for the *World Investment Report 2014*. In keeping with its central message, they agreed that achieving the sustainable development goals would require a transformative agenda involving leadership, partnership and vision. As a major institutional stakeholder for financing for development, UNCTAD could play a useful role in the post-2015 development agenda. Several delegates suggested that the Organization

should extend its work in this area. One delegate said that it could help define better policy initiatives to facilitate financing and investment by sovereign wealth funds and similar investors in poor countries.

34. In the area of investment policy, several delegates expressed concerns over the increased incidence of investment disputes under international investment agreements. They requested UNCTAD to further pursue its work in that area, to provide practical solutions and options for the renewal of expiring investment agreements and to assist in devising investment policies in line with the sustainable development goals, while ensuring policy coherence and the preservation of host Government policy space. Some delegates requested that UNCTAD should develop a road map for the reform of the international investment agreement regime in support of countries' efforts towards achieving sustainable development.

35. Several delegates called on UNCTAD to provide technical assistance to help countries promote investment in sustainable development sectors. A few delegates expressed the need to effectively monitor progress on the delivery of the sustainable development goals and emphasized the importance of the availability of quality data as a tool to support monitoring efforts.

36. Many delegates recognized that microfinance could be an important source of finance for small and micro businesses. These businesses, which could have a positive impact on employment generation, and social and rural development, faced challenges in raising finance. One panellist explained how impact investors could pool funds from private and public investors and lend to microfinance institutions, which in turn could lend to entrepreneurs in developing countries. The objective was to develop and manage private and public–private investments with a development impact. There were many tools for financing development, but better coordination between different actors was necessary to ensure that they reached those who needed financial resources. Another panellist explained that Governments could play a role in facilitating access to finance for microenterprises and new start-ups by providing incentives to promote investment by microfinance institutions as well as risk-sharing agreements. In some cases, microfinance institutions could not invest directly in a country and needed to set up special-purpose vehicles, which increased the cost of investment.

37. Capital markets could also help support investment in sustainable development by listing requirements on stock exchanges. The Sustainable Stock Exchanges initiative, jointly founded by UNCTAD and other organizations, aimed to promote sustainability in this way. Delegates commended the initiative as an important tool for encouraging companies and investors to look at not just financial indicators but also at social and environmental performance in their investment decisions. A few delegates noted that the "Euro-connect market" programme was an example of how to provide a channel for companies to raise finance for sustainable investment by supporting companies in one country to be listed on another country's stock exchange.

38. In response to comments from delegates, the Director of the Division on Investment and Enterprise said that UNCTAD had made valuable contributions in the area of responsible investment and had encouraged companies to report their performance on environmental, social and governance issues. In addition, it had addressed risk assessment issues through the Investment Policy Framework for Sustainable Development, which promoted best practices in countries' regulatory framework to attract investment.

2. Investment Policy Review of the Sudan

39. The meeting considered the Investment Policy Review of the Sudan (UNCTAD/DIAE/PCB/2014/5).

40. In his presentation, the Director of the Division on Investment and Enterprise said that the main challenges to sustainable development in the Sudan were economic and political instability, food insecurity and a lack of economic diversification. Key findings and recommendations of the Review included the need to clarify and streamline the legal and institutional framework for FDI and align it with the country's development strategies. The establishment of effective public–private dialogue mechanisms was key to ensuring the impact of reform. Commending the recent efforts of the Sudan, he stressed that UNCTAD stood ready to assist the country in the implementation of the recommendations suggested in the Review.

41. The Ambassador of the Sudan to the United Nations expressed her appreciation and gratitude for the work of UNCTAD and the financial support of the Government of Sweden in the preparation of the Review. The presence of the Minister for Investment of the Sudan at the session of the Commission testified to the country's commitment to the review process, which provided, was an opportunity for all stakeholders to discuss the investment climate of the country.

42. The Sudanese Minister for Investment described the development potential of his country and the role that FDI could play. Foreign investors were already present in several sectors of the economy, such as agriculture, animal breeding, minerals, oil and gas, and manufacturing. However, challenges in stabilizing the local currency and diversifying the economy remained daunting. Indeed, FDI had a leading role to play in addressing them. The Sudan welcomed FDI and strove to improve the investment environment and the country's international image. It planned to utilize its free zones more effectively in order to better integrate into international value chains. Other priorities for policy reforms included improving the legal and institutional framework for investment, building local capacities, diversifying the economy and ensuring a better geographical distribution of investment. He called for the continued support of UNCTAD in following through with these priorities and requested that UNCTAD hold a workshop in Khartoum to set out the implementation agenda of the Investment Policy Review.

43. Summarizing the main findings of the Review, the Head of the Investment Policies Branch of the Division on Investment and Enterprise highlighted some priorities for regulatory reform, including the need to provide secure access to land, reduce the complexity of the tax regime, modernize and upgrade the labour regime and adopt a more proactive approach to addressing the scarcity of local skills. The Investment Policy Review also called for effective implementation of the competition and environmental protection regimes and the strengthening of the investment promotion framework. A dedicated investment promotion agency would carry out investment promotion and image-building activities before diversifying its functions and resources.

44. The Head of the Department of External Relations of the National Investment Authority of the Sudan presented the country's recent policy reforms and said that some recommendations of the Review were already being implemented. She urged UNCTAD and other development partners to provide further support to the country as it strove to build an attractive investment climate.

45. During the ensuing discussion, two investors engaged in agricultural production described their experiences in investing in the Sudan. They described how their projects had increased productive capacities in the country and fostered the transfer of know-how to local employees. While acknowledging the efforts of the Government towards improving the investment climate and facilitating their investment, the lack of adequate infrastructure and difficulties in accessing finance were obstacles to be overcome, which called for public–private dialogue.

46. Representatives of other member States recognized the potential of the Sudan, praised its progress on policy reforms and stressed the need for continued progress in strengthening political stability and improving the capacity of civil servants and institutions. They called on development partners and donors to support the Sudan's efforts. Some delegates stressed the importance of long-term policy stability and consistency in the attraction of FDI. Others, citing the experience of their investors in the Sudan, stressed that investment opportunities abounded, but there were persistent issues, such as the repatriation of capital and profits, and weak governance. Some delegates said that foreign sanctions had negative effects on business opportunities in the Sudan.

47. Member States that had benefited from previous or ongoing Investment Policy Reviews also shared their experience and encouraged the Government to implement the recommendations as tools to attract investment for sustainable development. One of the main advantages of the review process was the close follow-up of its implementation, accompanied by technical assistance. However, while UNCTAD provided valuable expert assistance and advice, the responsibility for implementation remained with the beneficiary countries. One delegation requested UNCTAD assistance to review the entrepreneurship policy framework of its country and establish an Empretec programme there.

3. Investment Policy Review of the Congo

48. The meeting considered the Investment Policy Review of the Congo (UNCTAD/DIAE/PCB/2014/4).

49. The Director of the Division on Investment and Enterprise said that the Investment Policy Review was a useful tool for implementing investment policy reforms. African countries, which were making efforts to improve their business climate, remained a strong priority for the development community. According to UNCTAD statistics, the Congo was among the top performers in the region in terms of attraction of FDI, although the concentration of FDI inflows in the oil sector was a cause for concern. Government authorities had already made important reforms and were aware of the need to diversify the economy and of the role that FDI could play in this regard. Recommendations from the Review, based on the Investment Policy Framework for Sustainable Development, focused on measures to improve the investment climate and the promotion of inclusive models in agriculture.

50. The Minister in charge of Planning, Public Portfolio and Integration of the Congo stressed the importance of private investment for inclusive growth and development, and endorsed the recommendations contained in the Review. The Government was taking steps to improve the business climate, develop infrastructure and facilitate access to water and energy, goals that were reflected in the National Development Plan, which aimed for the country to become an emerging market economy by 2025. Against this background, he welcomed the review as a valuable tool that could be used to achieve economic diversification and agricultural development.

51. The Minister for Small and Medium-Sized Businesses, and Handicrafts highlighted the important link between enterprise development and investment and the role that SMEs could play in the Congolese economy. The Government had implemented various business facilitation measures on company creation and operation, in particular for SMEs. As a follow-up to the Investment Policy Review, the Ministry requested that UNCTAD provide technical assistance to promote women's entrepreneurship, set up a business linkages programme and implement the e-regulations platform to help streamline business start-ups and other business processes.

52. The Head of the Investment Policies Branch of UNCTAD presented the main findings of the report. Emphasizing the extraordinary potential of the Congo for FDI

attraction, he drew attention to a number of important challenges. These included a series of bottlenecks in the areas of company operations, taxation, access to skills and the regulation of land tenure. These bottlenecks needed to be removed in order to have a more transparent and predictable framework for investment. While substantial reforms had been undertaken in several key areas, their implementation was slow, and greater institutional coordination was necessary. He highlighted the key components of the strategy proposed by the Investment Policy Review to attract FDI in agriculture, a key instrument of the Government to achieve food security and economic diversification. UNCTAD remained committed to providing technical assistance in each of the strategic dimensions covered in the report.

53. Delegates of other member States commended the Government on the completion of the review and encouraged the authorities to continue ongoing reforms to improve the investment climate. They noted the importance of UNCTAD as a venue for sharing best practices in the area of investment for sustainable development. Some member States that had benefited from the Investment Policy Review programme, including some African countries, highlighted the positive impact of the implementation of the recommendations on their investment environment and encouraged the Government to follow through with the implementation of the recommendations.

54. In the discussion that followed, several participants emphasized key public infrastructure priorities and the need to promote sustainable agriculture and contribute to poverty reduction. To do so, it was necessary to promote inclusive models of agricultural development. The review proposed a dynamic strategy featuring a proactive approach to investment targeting. They encouraged the authorities to continue ongoing reforms and embrace regional development initiatives. In the long term, such reforms should result in higher national value added through successful integration into regional and global value chains.

55. A number of representatives of the private sector welcomed the recommendations of the review and commended the Government for its efforts to diversify the economy. There was a need to work on methods to improve public–private consultations in the investment policymaking process, continue on the path of reform and strengthen local productive capacities. Investment promotion agencies played a critical role in all phases of the investment process. Some investors shared their experiences of inclusive business models, involving local communities and farmers in local agricultural schemes.

D. Entrepreneurship and sustainable development goals

(Agenda item 5 (a))

56. The session discussed the role of entrepreneurship in sustainable development, building on United Nation General Assembly resolutions 67/2012 and 69/L.14 on entrepreneurship for development, as well as the report on the implementation of resolution 67/2012 prepared by UNCTAD in collaboration with the Department of Economic and Social Affairs.

57. The Director of the Division on Investment and Enterprise introduced the topic of the meeting, providing an overview of emerging challenges in the global context of weaker economic growth and demand, and increased economic uncertainty that had had an impact on job creation. He highlighted the key elements of a comprehensive entrepreneurship policy framework to effectively contribute to job creation and the attainment of the sustainable development goals. Such a framework should address implementation strategies and monitoring tools, and should have a special focus on efforts to effectively promote and facilitate green growth, as well as initiatives such as social enterprise and impact investment, and entrepreneurship for youth, women and vulnerable groups. UNCTAD had

engaged in cooperation with the Governments of the United States of America and the United Kingdom of Great Britain and Northern Ireland in the context of the Group of Eight on the issue of impact investment, and had prepared a publication in partnership with the Commonwealth entitled "Policy Guidelines on Youth Entrepreneurship", to appear later in 2015. UNCTAD stood ready to assist member States, collaborate with national and international institutions on the identification of indicators to measure the effectiveness of policies and provide an international forum for discussion, consensus-building and the exchange of good practices on a new generation of entrepreneurship policy development. Like UNCTAD, international organizations should play a part in developing a new generation of entrepreneurship policies aimed at achieving the sustainable development goals.

58. The Minister for Small and Medium-sized Enterprises, Social Economy and Handicraft of Cameroon described the economic challenges faced by his country. Cameroon had put entrepreneurship promotion at the core of its development strategy, with the assistance of donor-funded programmes; it had also reformed its institutional, legislative and regulatory systems to support entrepreneurship. For example, thanks to UNCTAD e-regulations and e-registration programmes, it was now possible to set up a business in 48 hours, a record that would be further improved in 2015. The Minister commended UNCTAD for the Empretec programme, which had started in Cameroon in 2014 and was highly appreciated by local entrepreneurs. The programme, financed through national resources, contributed to Cameroon's vision of becoming an emerging economy by 2035.

59. The representative of the Department of Economic and Social Affairs said that entrepreneurship and sustainable development, which contributed to proposed sustainable development goal targets 4.4 and 8.3, were closely linked and enjoyed support from the above-mentioned General Assembly resolutions. The body had indicated various opportunities to promote entrepreneurship as an enabling policy within the context of the goals: the Third International Conference on Financing for Development to be held in Addis Ababa in July 2015, the United Nations summit for the adoption of the post-2014 development agenda in New York in September 2015, as well as the report of the Secretary-General on entrepreneurship for development to be presented at the annual session of the General Assembly in September 2016. The representative also encouraged member States to incorporate sustainable development goals into their national development plans.

60. Some panellists stressed the importance of effective entrepreneurship promotion as part of an entrepreneurial ecosystem. There was a need to switch the focus of policy from the entrepreneur, as an individual, to the entrepreneur and the enterprise as part of a dynamic ecosystem. Other panellists emphasized entrepreneurial peer networks that should be at the core of encouraging youth entrepreneurship, and central role of entrepreneurship education as a lifelong competence. One delegate gave an example of how entrepreneurship centres at the municipal and city levels could be an effective means to promote youth entrepreneurship and the formation of start-up companies. The delegate requested UNCTAD to provide member States with best practices in the establishment of entrepreneurship support centres, especially at the city level.

61. The meeting also considered the topic, measuring the impact of entrepreneurship policies. All panellists agreed on the challenging nature of measuring the impact of entrepreneurship. One panellist acknowledged the multidimensional nature of entrepreneurship as a driver of economic development. Another panellist said it was important to monitor entrepreneurship trends as an input to evidence-based policies, and that there was a need for a comparability of indicators across countries. Yet another panellist pointed out that looking solely at business registration data was not fully effective

in measuring entrepreneurship. Based on the findings of a paper by the Group of 20 Youth Entrepreneurship Alliance, he discussed the role of high-growth enterprises in job creation and stressed the importance of engaging large companies in mentorship and financing.

62. The panellists presented several frameworks and indicators that could provide policymakers with practical diagnostic tools to define benchmarks and identify priorities for a country's entrepreneurial ecosystem. Panellists urged member States to develop national capacities to collect data on entrepreneurship through National Statistical Offices and to link up with international institutions conducting research and analysis, such as the Global Entrepreneurship Research Network, the Global Entrepreneurship Monitor, the Organization for Economic Cooperation and Development, and Prodem, an entrepreneurial development programme. One panellist suggested that UNCTAD could develop a comprehensive and structured framework for monitoring entrepreneurship policies by systematizing existing indicators by category and providing guidance on how indicators should be compiled. Such a structured framework would be built on existing policy impact-measuring experiences and frameworks and contain guidelines for countries on how to monitor priority areas.

63. During the interactive debate, some delegates requested UNCTAD to continue its work on entrepreneurship and, more specifically, on providing member States with practical guidance on implementing entrepreneurship policies as well as briefings on the sustainable development goals. One delegate urged UNCTAD and other organizations to take into account intellectual property issues in their work on entrepreneurship policies.

E. Policies to promote collaboration in science, technology and innovation for development

(Agenda item 5 (b))

64. The UNCTAD secretariat presented document TD/B/C.II/30, outlining the role of science, technology and innovation parks in fostering collaboration in science, technology and innovation for development and policies that could be adopted to promote them.

65. One panellist noted that successful parks provided both good physical infrastructure and services, including business support. Some parks were set up using a bottom-up approach, driven by users, whereas others reflected a top-down approach, driven by government policy action. The approach was dependent on the mix of available private and public finance, and local economic culture and history. The primary motives for establishing science, technology and innovation parks were to support technology transfer to park tenants, incubate innovative businesses and attract foreign high-technology investors. Policies relating to such parks needed to be coordinated with overall development policies and goals, fitting local conditions. Government support on different public policy areas, including education, research, industry, SMEs, trade and taxation, was also needed. It was important for key stakeholders to agree on broad aims, as well as pragmatic, clearly defined objectives. So was providing services to support technology transfer and innovation. As limited public financing was often a challenge, it was necessary for park real estate activities to contribute to financing. Further, science, technology and innovation parks benefited greatly from having a dedicated management team from the start.

66. Another panellist presented the experience of iHub, an innovation hub established in Nairobi in 2010. It had been originally designed to provide a space where technology entrepreneurs, academics and financiers could meet to exchange ideas on potential ventures. Over time, once initial grant financing was exhausted, the value proposition of iHub moved to providing advanced consultancy and user services. It developed a collaboration with m:lab East Africa, an incubator for mobile technology start-ups, and

supported the development of an increasing number of innovation hubs and incubators in Kenya. The iHub experience had demonstrated that traditional science, technology and innovation parks were not the only model for promoting collaboration and innovation. Today there were some 100 innovation hubs in Africa, spread across all five subregions.

67. Another panellist explained that the science, technology and innovation park policy of the European Union had become integrated into regional development policies and was part of broader convergence policy that was moving away from infrastructure development towards building a knowledge-based economy. Today there were 366 parks in the European Union. The main policy objective was creating high-quality employment opportunities; 80 per cent of science, technology and innovation park tenants were from the ICT sector, the rest mainly in biotechnology and energy. Support was moving towards providing services that aimed to create linkages with academics and researchers. The geographic proximity of the parks to major universities provided excellent opportunities. The experience of the European Union suggested a number of success factors. The first was that science, technology and innovation park policy needed to be at the core of a quadruple helix of firms, research and development organizations, the public sector and civil society. Science, technology and innovation parks needed to support specific business and innovation strategies for a geographic area. Finally, they were more successful when embracing sectors that were not fully mature. Risk factors included size (too small), an excessive number of goals, overdependence on public funding and a lack of competent management.

68. In reply to one delegate's query about the importance of intellectual property for the iHub business model and the nature of challenges encountered by iHub-supported firms, one panellist explained that intellectual property was not an issue, as the core objective was to develop collaboration. However, it was a concern for technology entrepreneurs in Nairobi, who would benefit from a simple, cost-effective means of filing patents. Other challenges included high import tariffs and skills gaps that needed to be addressed by the education and training system.

69. Another delegate said that investments in science, and research and development should be encouraged as a means of establishing science, technology and innovation parks. One delegate wished to know how to reconcile the longer-term benefits derived from investments in science, technology and innovation with short-term expectations. Another said that the iHub model was based primarily on a bottom-up approach, required fewer financial resources and was much faster to set up than traditional science, technology and innovation parks, even if funding remained a critical issue. In the view of another, political support was necessary for investment in research and development, and science, technology and innovation. Developing a vision and stable policies required effective public administration.

70. One delegate wondered how a developing country should define its innovation policy. Industry-specific priorities needed a link with innovation policies based on economic structure and development goals. Realistic, pragmatic outcomes and policy expectations were to be set accordingly. Science, technology and innovation parks were an essential tool for developing countries that were trying to stimulate structural transformation of their economies through industrialization, but large innovation support systems such as those found in Europe were not universal. Other policy tools and incentives, including tax credits and financing support, offered complementary possibilities. Increasing assistance to SMEs in the form of access to financing, venture capital, intellectual property, technical audits and workshops to exchange good practices were policy actions that could be considered.

71. One delegate noted that there was a fundamental underinvestment in science, technology and innovation in most developing countries and suggested that UNCTAD

should organize a meeting on the prioritization of science, technology and innovation in development policy. The UNCTAD secretariat gave a brief outline of the Organization's current and planned activities aiming to improve capacity for innovation policy in developing countries.

F. Progress report on promoting and strengthening synergies among the three pillars

(Agenda item 6)

72. The Director of the Division on Technology and Logistics and the Director of the Division on Investment and Enterprise reported on progress made in promoting and strengthening the synergies among the three pillars of UNCTAD in the areas of science, technology and innovation, and investment and enterprise development, and described the main achievements and impact resulting from the delivery of the mandates received in Accra and Doha.

73. In her presentation, the Director of the Division on Technology and Logistics discussed the interaction between the Division's activities on research and analysis, technical cooperation and consensus-building. For example, the *Information Economy Report 2015: Unlocking the Potential of E-commerce for Developing Countries,*[4] offered key findings for developing countries. Other recently issued publications dealt with the transfer of technology; gender issues; and science, technology and innovation, and urbanization. In technical cooperation, science, technology and innovation policy reviews had had an immediate impact on the policies of countries that had undergone such reviews in recent years, for example, Oman and Thailand. With regard to consensus-building, among other activities, UNCTAD had provided inputs on technology and innovation in the context of the post-2015 agenda.

74. The presentation of the Director of the Division on Investment and Enterprise focused on the Division's achievements through the implementation of results-based management, that is to say, management focused not only on results but also on the impact (medium- and long-term outcomes) of the activities conducted. The Director described the divisional strategy and underlined the orientation of the Division to support investment in sustainable development and in particular to align divisional activities with the sustainable development goals. The results-based management approach had been acknowledged as a best practice by independent auditors and evaluators, including the Office of Internal Oversight Services and the External Evaluation of Subprogramme 2. He also presented impact stories for all main core products and activities of the Division.

75. In the discussion that followed, delegations acknowledged the good use of quantitative and qualitative indicators for reporting the impact of divisional activities and praised the Division for the use of a results-based management approach and best practices for management in the area of investment and enterprise. Some delegations recommended the dissemination and adoption of this practice across the Organization. One delegate commended the high-level of transparency of the secretariat's work. Another delegate lauded the comprehensive overview of programme activities and their impact, emphasizing both the outstanding number and diversity of activities conducted by the Organization in the area of investment and enterprise for development.

[4] UNCTAD, 2015, *Information Economy Report 2015: Unlocking the Potential of E-commerce for Developing Countries* (New York and Geneva, United Nations publication, Sales No. E.15.II.D.1).

76. Some representatives said there was a need to continue strengthening the synergies between the three pillars of UNCTAD, in particular by improving internal coordination, collaboration and coherence of research. Cooperation with other United Nations agencies and international organizations should be further pursued. In response, the secretariat said that, individually, UNCTAD publications offered an analysis of specific issues from different angles but provided a bigger picture when put together. The secretariat highlighted the integrated management system of UNCTAD, which emphasized the sharing of information on activities within and among divisions to enhance synergies among the three pillars of work.

77. Some delegates queried the Organization's new policy of providing a joint activity report. The representative of one group supported the need for individual divisional reports to provide more detailed information on the work carried out across the Organization. The secretariat noted that a single report was concise but did not provide a detailed account of the impact of activities carried out by all programmes within UNCTAD. Furthermore, divisional results and impact reports also served other reporting requirements.

78. Several delegates said that the Division's work had had a positive impact of on the development process in their countries, especially through programmes such as Investment Policy Reviews, international investment agreements, Empretec and business facilitation. Many delegations underlined the Division's efforts to translate its policy analysis into a concrete programme of action. Its investment policy analysis and entrepreneurship activities had been very useful. Several delegates praised the Division's work on mainstreaming a gender perspective into its analysis of investment issues. One delegate noted the importance of enhancing the synergies and collaboration among the Division's programmes of work, while yet another lauded UNCTAD for the interactive nature of the recent expert meeting on the international investment agreement regime.

79. Several representatives commended UNCTAD for its technical assistance in the area of investment and enterprise and, given its impact, encouraged donors to extend their support to UNCTAD activities in favour of developing countries, in particular the least developed countries. One delegate had praise for the quality of the Global Enterprise Registration Portal. The secretariat noted that technical assistance in the area of investment and enterprise was tailored to countries' specific needs and delivered in alignment with the development challenges faced by beneficiary countries. The secretariat invited donors to continue providing assistance to UNCTAD activities in the area of investment and enterprise to ensure the continuation of services for which there was a high level of satisfaction and demand among member States.

80. Several delegates expressed appreciation for the recent World Investment Forum (October 2014) and emphasized the high quality and transparency of the multilateral discussions. One delegate called for the involvement of high-level leadership in the next Forum, to be held in Lima in 2016, encouraging countries and investment stakeholders to avail themselves of the opportunity offered by the Forum to work towards the sustainable development goals.

G. Other business

(Agenda item 7)

81. In view of the upcoming fourteenth quadrennial Conference of UNCTAD, the Commission agreed that the agenda of the eighth session of the Commission would be decided upon by the Trade and Development Board upon recommendation of the Bureau of the Board after the Conference.

III. Organizational matters

A. Opening of the session

82. The seventh session of the Investment, Enterprise and Development Commission was opened at the Palais des Nations, Geneva, on 20 April 2015, by Mr. Eduardo Sperisen-Yurt (Guatemala), Chair of the Commission at its sixth session.

B. Election of officers

(Agenda item 1)

83. At its opening plenary meeting on 20 April 2015, the Commission elected the following officers to serve on its Bureau:

Chair:	Mr. Christopher Onyanga Aparr (Uganda)
Vice-Chairs:	Mr. Francisco Pirez Gordillo (Uruguay)
	Ms. Vera Fuchs (Austria)
	Mr. Taco Stoppels (Netherlands)
	Mr. Muhammad Takdir (Indonesia)
	Mr. Alexander Zagryadskiy (Russian Federation)
Rapporteur:	Mr. Juan Carlos Sanchez Troya (Ecuador)

C. Adoption of the agenda and organization of work

(Agenda item 2)

84. At its opening plenary meeting on 20 April 2015, the Commission adopted the provisional agenda for the session (TD/B/C.II/27). The agenda was thus as follows:

1. Election of officers
2. Adoption of the agenda and organization of work
3. Reports of expert meetings:
   (a) Report of the Multi-year Expert Meeting on Investment, Innovation and Entrepreneurship for Productive Capacity-building and Sustainable Development
   (b) Report of the Expert Meeting on the Transformation of the International Investment Agreement Regime: The Path Ahead
   (c) Report of the Expert Meeting on Cyberlaws and Regulations for Enhancing E-commerce, Including Case Studies and Lessons Learned
   (d) Report of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting on its thirty-first session
4. Mobilizing investment for development: Contribution of UNCTAD in the context of financing for development
5. (a) Entrepreneurship and sustainable development goals
   (b) Policies to promote collaboration in science, technology and innovation for development

6. Progress report on promoting and strengthening synergies among the three pillars

7. Other business

8. Adoption of the report of the Commission to the Trade and Development Board

D. Adoption of the report of the Commission to the Trade and Development Board

(Agenda item 8)

85. At its closing plenary meeting, the Commission authorized the Rapporteur, under the authority of the Chair, to finalize the report after the conclusion of the meeting. The report would be submitted to the Trade and Development Board.

E. Closing plenary

86. The Commission adopted the Chair's verbal decision to reflect the consensus of the Commission on the draft agreed conclusions. It was the understanding of the Chair that member States had viewed the session as constructive and valuable. It was also his understanding that member States had recognized the important work of the Commission in the fulfilment of the Organization's mandate to contribute to the follow-up and implementation of the outcomes of the major United Nations conferences and summits on development, and that they looked forward to continued work in this regard.

87. Several delegations, including three groups, made closing statements.

88. The representative of one group, endorsed by one delegation, said that it had accepted the procedural agreed conclusions and the verbal decision of the Commission but that it would have preferred agreed conclusions of a substantive nature. She noted that having procedural agreed conclusions and a verbal decision did not set a precedent; further, future sessions of the Commission should work on the basis of having substantive agreed conclusions as set out by the Accra Accord in paragraph 203. In addition, it would be necessary to improve the scheduling of Commission work to leave adequate time for the negotiation of agreed conclusions that would not adversely affect the timetable of preparations for the next quadrennial conference in 2020.

89. One delegation suggested that the Commission might strengthen support for developing countries and take part in development summits and that the new development framework should focus on the role of UNCTAD. He encouraged the Organization to strive towards qualitative and quantitative improvements.

90. The representative of one group wondered whether the low attendance of the session could be attributed to a structural problem. His group would be willing to explore how to deal with the problem, perhaps within the frame of the next executive session of the Trade and Development Board to be held in June 2015.

91. The representative of another group expressed a preference for not having agreed conclusions, a situation that had occurred prior to UNCTAD XIII. It was important to focus on the objectives of the upcoming quadrennial conference of UNCTAD. With that in mind, the speaker requested the secretariat to prepare a calendar of preparatory work for the conference for all delegates.

Annex

Attendance*

1. Representatives of the following States members of UNCTAD and members of the Commission attended the session:

Afghanistan
Albania
Algeria
Argentina
Austria
Bangladesh
Belarus
Benin
Brazil
Burkina Faso
Burundi
Cameroon
Central African Republic
Chad
China
Colombia
Congo
Costa Rica
Côte d'Ivoire
Cuba
Djibouti
Dominican Republic
Ecuador
Egypt
Ethiopia
Finland
Germany
Ghana
Guatemala
Guinea
Haiti
India
Indonesia
Iran (Islamic Republic of)
Japan
Jordan
Kenya
Latvia
Libya
Madagascar
Mali
Mexico
Montenegro
Morocco
Mozambique
Namibia
Netherlands
Niger
Nigeria
Oman
Pakistan
Peru
Philippines
Poland
Qatar
Republic of Korea
Republic of Moldova
Russian Federation
Saudi Arabia
Senegal
Singapore
South Africa
South Sudan
Spain
Sudan
Sweden
Switzerland
Togo
Trinidad and Tobago
Tunisia
Turkey
Uganda
United Arab Emirates
United Republic of Tanzania
United States of America
Uruguay
Venezuela (Bolivarian Republic of)

* This list contains registered participants. For the list of participants, see TD/B/C.II/INF.7.

2. The following non-member observer State attended the session:

State of Palestine

3. The following intergovernmental organizations were represented at the Commission:

African, Caribbean and Pacific Group of States
African Union
European Union
Organization for Economic Cooperation and Development
International Organization of la Francophonie
Organization of Islamic Cooperation
Pacific Islands Forum Secretariat

4. The following specialized agencies were represented at the Commission:

United Nations Industrial Development Organization

5. The following United Nations organs, bodies and programmes were represented at the Commission:

Department of Economic and Social Affairs
Joint United Nations Programme on HIV/AIDS
United Nations Children's Fund
United Nations Development Programme

6. The following Non-Governmental Organizations represented at the Commission:

General category

Arab-Swiss Chamber of Commerce and Industry
International Network for Standardization of Higher Education Degrees
International Organization of Employers
Organisation camerounaise de promotion de la coopération économique internationale

Special category

International Ocean Institute